

Remarks

1. The Examiner has rejected claims 1, 9, 12 and 18 to 20 under 35 U.S.C. §102 as being anticipated by Baines (US6421334). Applicants note for the record that the present application and the prior art reference Baines are under the common ownership of Nortel Networks Limited.
2. Of claims 1 to 20 currently pending in this application, independent claims 1, 9, 14, 16 and 18 have been amended in a manner believed to better distinguish the present invention over Baines, claims 19 and 20 have been cancelled and remaining claims retained in their current form.
3. In Baines, the base station having established a set of timing offsets values corresponding to respective ones of multi-path components of a received signal sends the set of timing offset values and associated codes to a subscriber terminal which stores these in a lookup table. Subsequently, when the base station determines that the signal component of the multi-path signal having the greatest strength has faded and another component has become the strongest, it sends an appropriate one of the codes to the subscriber terminal. The subscriber terminal on receiving the code accesses the lookup table to obtain a corresponding predetermined timing offset based on the code. The subscriber terminal then uses the predetermined timing offset retrieved from the lookup table to change its timing of the newly determined strongest signal component such that the component newly identified as having the strongest signal strength is received at the base station in accordance with a reference time. However, in highly mobile environments where entirely new multi-path components having the strongest signal strength may appear in a signal received at the base station, the technique of Baines requires a recalculation of the whole set of timing offsets since it does not have a coded offset for the newly appeared multi-path component in the set of timing offsets previously provided to the subscriber terminal.

4. Therefore, Baines teaches the sending of either a code or a new set of timing offsets for each determination of a best signal component. In Baines a code is sent where the best signal component is determined as being a component of a multi-path signal for which a set of timing offsets was previously determined. In Baines, a new set of timing offsets is sent where it is determined that the best signal component is not a component of the multi-path signal for which a set of timing offsets was previously determined. In low mobility and fixed wireless systems, the signal components of a multi-path signal vary slowly and can over a long duration result in some components disappearing and new components appearing. However, Baines does not teach, for each determination of a best signal component, sending a timing offset value calculated at the base station, said timing offset value comprising a difference in time between reception of a best signal component of a multi-path signal transmitted from said subscriber terminal to said base station and a reference time.

5. In contrast to Baines, the present invention as now defined by the amended claims comprises the method of, for each subscriber terminal signal received, determining a best signal component; wherein for each determination of a best signal component, the method comprises the steps of: determining a difference in time between reception of said best signal component and a reference time; and transmitting to said terminal a transmission timing offset value calculated at said base station in order to receive said best signal component at substantially said reference time, said transmission timing offset value comprising said difference in time between reception of said best signal component and said reference time. Thus, a timing offset value calculated at the base station is transmitted to the subscriber terminal for each signal component determined to be the strongest signal component. By sending a timing offset value rather than a code, the present invention can accommodate newly appearing multi-path components without any additional steps, i.e. without needing to recalculate a whole set of timing offsets as in

Baines. Thus, the system of the present invention is better adapted to highly mobile environments. Also, the purpose of using codes in Baines is to reduce control signal overhead. Therefore, it would not have been obvious to replace the codes used in Baines with actual offset timing values since this would require greater control signal overhead.

6. In view of the foregoing, it is respectfully submitted that amended claim 1 not only defines an invention that is novel over Baines but which is not rendered obvious thereby.

7. Independent claims 9, 14, 16 and 18 have been amended to be generally consistent with amended claim 1 and are therefore believed to be in an allowable form for the reasons as discussed above.

8. Dependent claims 2 to 8, 10 to 13 contain all the limitations of their respective independent claims and are thus also believed to be in an allowable form.

9. Favorable reconsideration of this application is respectfully requested.

July 19, 2006

Respectfully submitted,



William M. Lee, Jr.
Registration No. 26,935
Barnes & Thornburg LLP
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 214-4800
(312) 759-5646 (fax)